



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/682,375

10/09/2003

Ramasamy Krishnamoorthy

1230-101.US

6106

7590

11/03/2006

Colin P. Abrahams

Suite 400

5850 Canoga Avenue

Woodland Hills, CA 91367

EXAMINER

MILLER, CARL STUART

ART UNIT

PAPER NUMBER

3747

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/682,375

Applicant(s)

KRISHNAMOORTHY ET AL.

Examiner

Carl S. Miller

Art Unit

3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betz in view of Constantine and the admitted prior art noted by applicant in his last response.

Betz teaches a fuel injection pump including at least one inlet banjo bolt and a second fitting which is for an outlet and/or return line, including a vapor return function-via vapor bleed (44). Applicant admits for the record that it is known in the art to use a banjo ballot including a pressure relief valve on a diesel fuel pump in order to return excess fuel pressure back to a low pressure area.

Constantine teaches the use of gravity to feed a fuel to a low-pressure fuel-pumping device that, in turn, feeds a high-pressure fuel pump.

It would have been obvious to modify Betz by using an outlet banjo bolt as element (46) as taught by the known prior art because both teachings were for return fuel lines from an injection pump housing and to feed the low pressure pump as taught by Constantine because this was an independent feature of the system.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Betz, Constantine and the known prior art as applied to claim 6 above, and further in view of Johnston.

Johnston teaches the use of a fuel pressure-regulating valve in a fuel system wherein the valve includes a very small passage that allows the bleeding of fuel vapor from the valve even when the valve is closed.

It would have been obvious to modify Betz as noted above and to use the valve of Johnston to regulate the pressure of and bleed the housing because it was known to combine these features into one valve and Betz already required a single filling that preformed both a return fuel flow and a vapor return.


Applicant's arguments filed August 18, 2006 have been fully considered but they are not persuasive. In particular, the applicant has now admitted on the record that the pressure relief valve of the device is known and known to be used to regulate pressure in an injection pump housing. These facts make the use of Channing against the claims unnecessary. As noted above the teachings of Constantine are independent features of the invention, unrelated to the pressure and vapor bleed features. Finally, the applicant will note that the claims no longer require the vapor be located in the valve seat.

Since some of the changes in the rejection are at least arguably unrelated to applicant's amendments, this action has been made non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl S. Miller whose telephone number is 571-272-4849. The examiner can normally be reached on MTWTHF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Cronin, can be reached on 571-272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Carl S. Miller  
Primary Examiner